

DOCUMENT RESUME

ED 258 064

CG 018 266

AUTHOR Knight, Patrick A.; And Others
TITLE Women and Women's Issues in Industrial and Physiological Psychology.
PUB DATE 28 Aug 84
NOTE 19p.; Paper presented at the Annual Convention of the American Psychological Association 92nd, Toronto, Ontario, Canada, August 24-28, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150) -- Information Analyses (070)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Females; *Psychophysiology; Researchers; *Research Needs; *Research Problems; Scholarly Journals; *Sex Differences
IDENTIFIERS *Industrial Psychology

ABSTRACT

In the area of industrial/organizational (I/O) psychology and physiological psychology, issues of gender have only begun to be addressed. An examination of the recent literatures in I/O and physiological psychology was undertaken to document the extent to which women are used as research subjects, to determine whether or not research relevant to gender issues is being conducted, and to explore the level of research activity by women in the areas of I/O and physiological psychology. Five journals in which I/O research is published and four journals on physiological psychology research were reviewed. All articles in the I/O journals from 1980-1983 were examined for gender of author, gender of sample, gender analyses, and the relevance of the research to gender issues. The results revealed that, of the 815 I/O articles with samples, over half failed to describe the gender composition of the sample; and only one-third of those with gender composition descriptions reported gender analyses. The results of the review revealed that 13.4 percent of the articles had a female first author and 13.5 percent had a female second author. When articles in physiological psychology journals from 1977-1984 were examined, it was found that women accounted for 19.7 percent of the total authorship. Only 12 percent of the physiological journal articles were relevant to gender issues. (NRB)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED258064

Women's Issues

1

Women and Women's Issues in Industrial
and Physiological Psychology

Patrick A. Knight, Frank E. Saal,
and Stephen W. Kiefer

Department of Psychology
Bluemont Hall
Kansas State University
Manhattan, KS 66506
(913) 532-6850

CG 018266

Presented at the 92nd Annual Convention of the
American Psychological Association,
Toronto, August 28, 1984.

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- ☒ This document has been reproduced as
received from the person or organization
originating it.
☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official NIE
position or policy.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Patrick A. Knight

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Women and Women's Issues in Industrial
and Physiological Psychology

As described in Eristow, Frieman, and Dickson's (1984) evaluation of abnormal psychology texts, there has been a substantial amount of research on women and women's issues in the field of abnormal behavior. In the areas of industrial psychology and physiological psychology, however, issues of gender have only just begun to be addressed. Until recently, for example, the psychology of organizations was exclusively the psychology of men in organizations. Consider the title of the first edition of Bass and Barrett's (1972) I/O textbook: Men, Work, and Organizations. Today, it appears that things are changing, at least on the surface. Bass and Barrett's (1981) second edition is entitled People, Work, and Organizations. More substantively, consider what has happened in the area of leadership research. One decade ago, Stogdill's (1974) classic review of the leadership literature was published. This book includes summaries and references to over 3,000 works dealing with leadership issues up to 1974, and is generally considered to have been an exhaustive treatment of the topic. Stogdill's book therefore accurately reflects the attention that had been paid to women by I/O psychology: it contains no

section, chapter, or even chapter subheading devoted to women leaders. In fact the words "woman" and "women" do not even appear in his index. In 1981, Bass updated Stogdill's work, adding over 2,000 additional references. This revised edition does contain a separate, albeit short, chapter on women as leaders, indicating a growing acknowledgement that women are important in organizations. Similar conclusions can be drawn about the increasing attention that women and women's issues have received in other areas of industrial/organizational psychology: After decades of neglect, the field is beginning to recognize that there are two sexes.

In our examinations of the industrial/organizational psychology and the physiological psychology literatures, we were concerned with the way women's issues have been treated in textbooks. Given the relatively recent advent of academic or research interest in gender, however, we decided to focus not on the textbooks per se, but rather on original research. We based this decision on our belief that in order for textbooks and curricula in psychology to present research involving women and issues of concern to women as integral elements of the field, the available research and theory must first meet certain standards.

According to U.S Census Bureau figures released this year, as of 1982 over half of the paid workforce in the United States was female, and 37 percent of the "year-round, full-time" employees were women. It is therefore essential that women be fully represented in research in I/O psychology, and not solely for the purpose of studying women's roles in the workplace, but also to make the entire field relevant to the realities of modern society. In a similar fashion, half of the population in general is female, which is a good argument for researchers in all areas of psychology, including physiological psychology, to attend specifically to gender differences and similarities.

One purpose of our research was therefore to examine the recent literatures in I/O and physiological psychology, and gauge the integration of women and gender-related issues into these literatures. In the I/O field we wished to document the extent to which women are being used as subjects in research. Related to this question, we also set out to determine whether or not researchers are reporting the results of gender-related analyses. In the physiological area, we were interested in finding whether or not research that is potentially relevant to gender issues is being conducted.

A second purpose of the study was to examine the level of research activity of women in these two areas. In 1971, Virginia Schein published a paper in American Psychologist entitled "The Woman Industrial Psychologist: Illusion or Reality." Schein's article included the results of a survey of both male and female members of Division 14, from which salary and other employment comparisons were made. She also presented a summary of the percentage of female authors in two prominent journals from 1965 to 1970. During that period the percentage of female senior authors in Journal of Applied Psychology was 4.0 percent, while in Personnel Psychology it was 2.5 percent. Corresponding figures for junior authors were 6.6 percent and 2.5 percent. Overall, 3.6 percent of the articles had female first authors, and another 5.5 percent had female junior authors. We wanted to see if these percentages had changed substantially in the decade and a half since Schein's report, while adding additional I/O journals to the review. We also addressed new questions, such as the topics studied by female versus male authors. Similar issues were addressed for physiological psychology, though we have no past data for making comparisons in that literature. The level of research activity of women was investigated because the

integration of women's literature and women's issues into psychology may depend to a great extent upon the active participation of female researchers, particularly given the dismal record established by men in this regard.

Method

Industrial/Organizational

Five journals in which I/O research is published were selected for study. These journals were: Academy of Management Journal, Administrative Science Quarterly, Journal of Applied Psychology, Organizational Behavior and Human Performance, and Personnel Psychology. AMJ and ASQ are interdisciplinary journals, while the others publish only psychological research. Every article published in these journals from 1980 through 1983 was included in the review. For each article, the following information was recorded: gender of the authors, gender composition of the sample, whether any gender analyses were reported, the topic or topics within the field of I/O psychology for which the article was relevant, and whether or not the research was relevant to gender issues. We classified as relevant any study in which gender was the primary issue of interest, or in which gender effects were potentially important, whether or not such effects were tested. From these basic data a

number of other measures were derived.

There were a number of articles for which one or more of the authors used only initials, or had names with which we were not familiar. Consequently, we could not determine the gender of the authors for every article. There were 83 authors who fell into this category. In each of these cases of undetermined author gender, we wrote to the first author of the article, explained our dilemma and asked him or her to provide the necessary data. One letter was returned with no forwarding address, and nine people did not respond, resulting in an 88 percent response rate, and a 99 percent accuracy rate in identifying author gender.

Physiological

Since the research in physiological psychology uses human subjects much less often than I/O psychology, the review of this literature focused on the involvement of female researchers, and whether or not gender relevant issues are being addressed.

Four journals were included in the review of the physiological literature: Physiological Psychology from 1977 to 1983; Journal of Neuroscience from 1981 to 1982; Behavioral Neuroscience from 1977 to 1983; and the articles relevant to physiology and behavior in Science from January, 1983 to June, 1984. For each article the

number of authors, the gender of the authors, and whether the article dealt with a gender-related topic were recorded.

Results

Industrial/Organizational

Women as Subjects in Research. In the five organizational journals there were a total of 1,085 articles during the period of the review. Some of these articles were literature reviews, some were theoretical papers, some dealt with quantitative or analytical issues, and some of the articles from the interdisciplinary journals were concerned with "macro" level organizational variables, and not with human behavior per se. These articles, totaling 270, were not based on observations or measures of human behavior, and were thus classified as having no samples.

Additionally, two hundred and seventeen articles were classified as being irrelevant to gender issues.

Eighty-nine percent (193) of these articles were also in the group without samples. The discussion to follow is based on the data from the 815 articles with samples.

One of the most striking, and alarming, findings in the data was the general ambivalence of researchers toward issues of gender. The authors of only 405 articles, or 49.7 percent, described the gender

composition of their samples. The remaining 50.3 percent of the articles made no mention of the number or percentage of men and women in the studies. Examining individual journals, we found that the worst offender was Administrative Science Quarterly, in which 73.5 percent of the articles did not describe the gender of the subjects. The fact that during this time ASQ published only 49 articles examining individual behavior lessens the impact, but not the implications, of this statistic. The best record in this regard was the APA-published Journal of Applied Psychology, but even here 39.5 percent of the articles did not indicate how many men and women participated in the research. Across years there has been a slight increase in the proportion of published articles in which the gender of the samples is described, from 43.3 percent in 1980 to 53.0 percent in 1983. Most of this improvement is attributable to a 14.5 percent increase in reported gender in Journal of Applied Psychology, which published 35 percent of the articles in the review. The other journals, perhaps because of the smaller number of articles published, showed wide fluctuations in the percentage of articles reporting sample gender characteristics, with no discernable trend over the four year period.

Similarly disappointing results were found when we

examined the frequency of gender-related analyses in these articles. Overall, only 33 percent of the articles that described the gender of the subjects reported any type of analysis involving gender. This represents just over 16 percent of all of the articles with samples. We were fairly liberal in our classification of a "gender analysis," and consequently many of the articles that are included in this group report only a correlation or two involving gender, and provide little useful information about gender differences. In some cases, the lack of gender analyses could be explained by the absence of either men or women in the sample. Often the single-gender nature of the sample was a consequence of the specific population being studied (e.g., nursing samples tended to be exclusively female, while samples of loggers tended to be exclusively male). In other cases, though, including laboratory studies in which obtaining female subjects in representative numbers should not have been a problem, single-gender samples were used without any rationale being offered, rendering gender analyses impossible.

As with the reporting of sample gender, we found that there were differences between journals in the proportion of articles reporting gender analyses. The best record was held by Personnel Psychology, with 43

percent of the articles that reported sample gender also reporting gender analyses. This was followed by Journal of Applied Psychology at 38 percent, with the other journals 10 to 15 points lower.

One unusual finding was that a substantial proportion of the articles that reported gender analyses failed to report the gender composition of the sample. A total of 13 percent of the articles with gender analyses fell into this category. Except for Administrative Science Quarterly, which had only three articles with gender analyses, the worst offender was Journal of Applied Psychology. Seventeen percent of the articles in JAP that included the results of an analysis involving gender failed to include the number of men and women in the sample. The best journal in this regard was Organizational Behavior and Human Performance, in which every gender analysis was accompanied by a description of the sample's gender characteristics.

While the results of these analyses indicate a rather widespread lack of concern for issues of gender on the part of authors, reviewers, and editors, we suspected that female authors might have a better track record in this regard. We therefore repeated some of the basic analyses for only those articles with female

senior authors. As we predicted, when the first author of an article was a woman, there was a greater chance that the gender composition of the sample would be reported: 63 percent of these articles reported gender, versus just under 50 percent overall. When it came to reporting gender analyses, however, the women did slightly worse than the overall percentage: only 28 percent of the articles authored by women that reported sample gender included some sort of gender analysis, as opposed to 33 percent for all articles reporting sample gender.

Women as Authors. Schein (1971) reported that between 1965 and 1970, 3.6 percent of the articles in Journal of Applied Psychology and Personnel Psychology had female senior authors, and 5.5 percent had female junior authors. For the period of 1980 to 1984, we found that 14.6 percent of the articles in these two journals had women as senior authors, while 16.4 percent had a female junior author. When all five journals were considered together, 13.4 percent of the articles had a woman as the sole or first author, while 13.5 percent had a woman as second or subsequent author. The journal with the highest percentage of female senior authors was Administrative Science Quarterly, with 16.9 percent, and the journal with the lowest percentage was

Organizational Behavior and Human Performance, with 8.6 percent. It is evident that there has been a great deal of growth in the participation of women in organizational research since the late 60's. Even within the span of the current review there was a substantial growth in this regard, with the number of female senior authors growing 65.4 percent between 1980 and 1983, and the total number of female authors growing 21.2 percent during this same period.

The most common pattern of female authorship was a junior author who published with one or more men. Forty-one percent of the articles with female authors fell into this category. Another 16 percent had multiple female authors, and these articles were about evenly split between those with male senior authors and those with female senior authors.

Finally, we examined the rate of publishing by female senior authors in various topic areas in industrial/organizational psychology. Each article in the review was categorized as being relevant to one or more of 12 topic areas (e.g., selection and placement, job satisfaction). Chi-square tests were conducted on the proportion of articles with female senior authors in each of these areas, with the expected proportion equal to the overall percentage of female senior authors

(14.6%). Generally, we found that women publish at about the same rate in all areas of I/O psychology. Significant chi-squares were found only for selection and placement, $\chi^2(1, N = 108) = 5.36$, and leadership, $\chi^2(1, N = 147) = 4.94$, $ps < .05$. In both cases, women published in these topic areas more frequently than predicted by the overall rate.

Physiological

In the four journals included in the physiological review, there were 1,789 articles, with a total of 4,523 authors. Of these authors, the gender of 3,643, or 80.5 percent, could be identified. The following discussion is based on these cases. Compared to the results of the I/O review, the research activity of women in physiological psychology is relatively low. Women accounted for 19.7 percent (716) of the total authorships; 7.8 percent of the senior authors, and 11.9 percent of the junior authors. Behavioral Neuroscience had the highest percentage of female senior authors, 11.6 percent, with the other journals between 5 and 6 percent. The percentage of female junior authors ranged from 10 percent (Behavioral Neuroscience) to 14 percent (Physiological Psychology). Approximately 13 percent of the articles with female authors had more than one female author.

Overall, the number of articles in the physiological journals that were relevant to gender issues was only 12 percent. There was, however, quite a bit of variance: Twenty-one percent of the articles in Behavioral Neuroscience, but only 2.5 percent of the articles in Journal of Neuroscience had possible gender implications.

Discussion

The findings of these reviews of the industrial/organizational and physiological psychology literatures have important implications for the integration of research on women into textbooks and curricula. As noted earlier, with the increasing number of women in the workforce, there has been growth in the amount of research addressing issues and problems faced by women in organizations. When textbook authors have included this literature in their works, it has generally been through a process that we have come to call "add women and stir." That is, textbooks appear to have been written without any consideration of gender-relevant research, and then brief sections have been added after the fact to acknowledge that some research on some topics has considered gender. Another version of the "add and stir" approach is to place the bulk of the literature on women in a separate chapter, usually at

the end of the book (though prior to the references or index). Both of these strategies seem to us to be more like adding women and not stirring. Segregating the literature on gender seems to imply a second-class status for women and research involving women. It is as though women were a new topic in the field, rather than people for whom the old topics, such as selection, training, motivation, and leadership, have new relevance.

While we are not satisfied with the way research involving women has been presented in I/O textbooks, we also believe that much of the responsibility lies with journal authors, reviewers, and editors. The fact that fewer than half of the empirical studies published in the past four years reported the number of men and women in their samples is not only embarrassing, it makes it difficult to generalize the results of much of this research. When it comes to writing a textbook that includes a balanced treatment of women, the neglect of sample gender means that most of the literature is worthless for this purpose.

In order for I/O textbooks to meaningfully address the growth of women in organizations, researchers must first realize that women are no longer "special cases." Women are indeed different than men in ways that are

relevant to organizational behavior. The socialization of women, both in society as a whole and in specific organizations, may result in differences in the behavior, attributions, needs, etc. of male and female workers. Women are not, however, oddities that need to be somehow explained. Women can no longer be ignored by all except the small number of researchers with specific interests in women's issues. Women are now a major component of the workforce, and researchers must recognize this by (a) reporting the gender of their samples, and not assuming, for whatever reason, that gender is irrelevant; and (b) including women in research samples and conducting appropriate analyses on gender. If no gender effects are found in the data, that is fine and it should be reported. If no gender effects are assumed in the mind of the researcher, that is a hypothesis, and it should be tested.

Concerning female authors, we are encouraged by the increase since 1971 in the proportion of the published I/O literature written by women. This increase is particularly satisfying given the higher percentage of female senior authors who report the gender of their subjects. Unfortunately, these women are no better than their male colleagues when it comes to analysing gender differences. In the area of physiological psychology,

the proportion of articles with female authors is somewhat lower. At this time we can only speculate as to whether this low rate represents an increase over even lower rates in the past, or if there has been little change over the years. We hope that the number of female authors in all areas of psychology continues to grow, as we believe that this will speed the acceptance of gender as a routine variable to report and consider in analyses, which will in turn make truly representative and nonsexist texts and curricula possible.

References

- Bass, B.M. (1981). Stogdill's handbook of leadership. New York: Free Press.
- Bass, B.M., & Barrett, G.V. (1972). Men, work, and organizations. Boston: Allyn and Bacon.
- Bass, B.M., & Barrett, G.V. (1981). People, work, and organizations. Boston: Allyn and Bacon.
- Schein, V.E. (1971). The woman industrial psychologist: Illusion or reality? American Psychologist, 26, 708-712.
- Stogdill, R.G. (1974). Handbook of leadership. New York: Allyn and Bacon.